UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/791,359	JONES ET AL.
	Examiner	Art Unit
	SYED BOKHARI	2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _25 February 2009_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-3,6-8,10-15,17,20-22,24-29,31 and 32_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-3,6-8,10-15,17,20-22,24-29,31 and 32_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Applicant amendment filed on February 25th, 2009 has been entered. Claims 1,

12, 14 and 21 have been amended. Claims 1-3, 6-8, 10-15, 17, 24-29, 31 and 32 are

still pending in the application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
        obviousness or nonobviousness.

4.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

5.   Claims 1-3 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Jones et al. (US 2005/0033853) and in view of Hossain et al. (US 2004/0258028

A1).

        Jones et al. discloses a communication system to identify devices employing

point to point over Ethernet encapsulation with the following features: regarding

claim 1, a method of identifying a device, the method comprising (Fig. 1, distributed

network, see "utilizes point to point over Ethernet PPPoE" recited in Abstract lines 1-3),

receiving a request to establish a Point to Point Protocol over Ethernet (PPPoE) session

on behalf of a Local Area Network (LAN) side device that is a LAN node in a LAN that is

in communicate with a router (Fig. 2, CPE device connected via an IP network to

access concentrator, see "the access concentrator receives a PPPoE active discovery

session packet from CPE" recited in paragraph 0008 lines 9-16 and paragraph 0012

lines 2-5), outputting from the router a PPPoE discovery stage packet that comprises a

tag identifying the LAN side device (Fig. 2, CPE device connected via an IP network to

access concentrator, see "sending a PPPoE active discovery packet" recited in

paragraph 0009 lines 1-5), receiving an access concentrator packet responsive to the

PPPoE discovery stage packet (Fig. 3, stages of PPPoE discovery, see "generates and

transmits PPPoE active discovery session (PADS) confirmation packet in step 308"

recited in paragraph 0031 lines 9-14), the access concentrator packet including the tag

recognizing the tag in the access concentrator packet (Fig. 7, illustrates a tag for use in

Ethernet payload, see "access concentrator must include the tag unmodified" recited in

paragraph 0042 lines 1-15) and communicating the tag from the access concentrator

packet to the LAN side device (Fig. 7, illustrates a tag for use in Ethernet payload, see

"the tag is utilized in unique way to identify CPE device" recited in paragraph 0042 lines

11-15), enabling a point to point protocol (PPP) session for the LAN side device

identified as the requesting device of the PPP session (Fig. 3, stages of PPPoE

discovery, see "the Ethernet communication session is then conducted between the

client and the server" recited in paragraph 0031 lines 11-14) and enabling a different

Point to Point Protocol (PPP) session for the different LAN side device identified as the

requesting device of different PPP session (Fig. 3, stages of PPPoE discovery, see "the

Ethernet communication session is then conducted between the client and the server"

recited in paragraph 0023 and lines 1-11 and paragraph 0031 lines 11-14); regarding

claim 2, wherein the PPPoE discovery stage packet comprises a PPPoE Active

Discovery Initiation packet (Fig. 3, stages of PPPoE discovery, see "active discovery

initiation PADI packet" recited in paragraph 0030 lines 8-10); regarding claim 3, further

comprising maintaining information associating the LAN side device with the tag and the

different LAN side device with the different tag (Fig. 2, CPE device connected via an IP

network to access concentrator, see "access concentrator 223 connected to a database

226 to store identifier information" recited in paragraph 0028 lines 8-11); regarding

claim 6, wherein the access concentrator packet comprises a PPPoE Active Discovery

Offer packet and comprises the tag in an unmodified form (Fig. 2, CPE device

connected via an IP network to access concentrator, see "sending a PPPoE active

discovery packet" recited in paragraph 0009 lines 1-5); regarding claim 7, wherein the

tag complies with a Host-Unique TAG construct described in IETF RFC 2516 (Fig. 2,

CPE device connected via an IP network to access concentrator, see "include a tag

host-unique tag" recited in paragraph 0008 lines 7-9)

     Jones et al. do not disclose the following features: regarding claim 1, receiving a

different request to establish a different PPPoE session on behalf of a different LAN

side device, the different LAN side device at a different LAN node of the LAN and

outputting a different PPPoE discovery stage packet that comprises a different tag

identifying the different LAN side device.

     Hossain et al. disclose a communication system for translating data

communications from a WLAN using PPPoE to a PPP format with the following

features: regarding claim 1, receiving a different request to establish a different PPPoE

session on behalf of a different LAN side device, the different LAN side device at a

different LAN node of the LAN (Fig. 3, a nodal operation and signal flow diagram of a

data communications network, see "the access concentrator receives the message 302

from any one of plurality of clients of WLAN 140 of fig. 1" recited in paragraph 0037

lines 1-12 and paragraph 0044 lines 7-15) and outputting from a router a different

PPPoE discovery stage packet that comprises a different tag identifying the different

LAN side device (Fig. 3, a nodal operation and signal flow diagram of a data

communications network, see "the APC 142 responses to the message and uniquely

identifies the PPPoE data session 311 " recited in paragraph 0037 lines 15-38 and

paragraph 0044 lines 7-15).

It would have been obvious to one of the ordinary skill in the art at the time of

invention to modify the system of Jones et al. by sing the features, as taught by Hossain

et al., in order to provide receiving a different request to establish a different PPPoE

session on behalf of a different LAN side device, the different LAN side device at a

different LAN node of the LAN and outputting a different PPPoE discovery stage packet

that comprises a different tag identifying the different LAN side device. The motivation of

using these functions is to enhance the system in a cost effective manner.

6.   Claims 14-15, 17 and 20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Jones et al. (US 2005/0033853) in view of Hossain et al. (US

2004/0258028 A1) and further in view of Yusko et al. (US 2004/0001496 A1).

Jones et al. discloses a communication system to identify devices employing

point to point over Ethernet encapsulation with the following features: regarding

claim 14, a device identification system, comprising (Fig. 1, distributed network, see

"utilizes point to point over Ethernet PPPoE" recited in Abstract lines 1-3), an access

concentrator having a computing platform and an interface operable to facilitate a

communicative coupling of a plurality of remote devices to the computing platform

(Fig. 2, CPE device connected via an IP network to access concentrator, see "CPE

devices 225 are connected to access concentrator " recited in see paragraph 0027 lines

1-4), a second interface communicatively coupled to the computing platform (Fig. 2,

CPE device connected via an IP network to access concentrator, see "access

concentrator 223 is connected to a database" recited in see paragraph 0028 lines

4-11), operable to facilitate an outputting of a collection of information representing a

PPP session of a first of the plurality of remote devices (Fig. 2, CPE device connected

via an IP network to access concentrator, see "sending a PPPoE active discovery

packet" recited in paragraph 0009 lines 1-5), a Local Area Network (LAN) engine

communicatively coupled to the interface and configured to recognize an identification

tag in a packet included in a discovery stage of the PPP session output by a router, the

identification tag identifying a subscriber LAN device communicating the packet via the

first of the plurality of remote devices (Fig. 1, distributed network, see "discovery packet

having a tag including a device identifier field" recited in paragraph 0012 lines 1-10),

Wherein the subscriber LAN device is a LAN side device that is a LAN node in a LAN

that is in communication with a router and is identified as the requesting device of the

PPP session (Fig. 3, stages of PPPoE discovery, see "the Ethernet communication

session is then conducted between the client and the server" recited in paragraph 0031

lines 11-14), wherein the LAN engine is configured to recognize a different identification

tag in a different packet included in a discovery stage of the different Point to Point

Protocol (PPP) session that identifies a different subscriber LAN device communicating

the different packet via a different one of the plurality of remote devices and is a LAN

side device, the different LAN side device that is different LAN node in the LAN and is

identified as the requesting device of different PPP session (Fig. 3, stages of PPPoE

discovery, see "the Ethernet communication session is then conducted between the

client and the server" recited in paragraph 0023 and lines 1-11 and paragraph 0031

lines 11-14), wherein the LAN engine is at least partially embodied by a processor

accessing a computer-readable medium having computer-readable instructions (Fig.4,

an ADSL bridge/router board which incorporates a module configured to transmit a

PPPoE active discovery packet including tag, see "board 400 includes a memory control

409 with connecting flash 411 and SDRAM 410" recited in paragraph 0035 lines 1-10),

executing the computer-readable instruction to recognize an existence of the tag to

identify device identification information contained in the tag (Fig.4, an ADSL

bridge/router board which incorporates a module configured to transmit a PPPoE active

discovery packet including tag, see "module 415 configured to transmit active discovery

packet including tag" recited in paragraph 0034 lines 1-11) and to update a memory

associated with a Broadband Remote Access Server to acknowledge the device

identification information (Fig. 2, CPE device connected via an IP network to access

concentrator, see "access concentrator 223 receives the tag information and stores the

device identifier code in a database" recited in see paragraph 0032 lines 7-13);

regarding claim 15, wherein the tag complies with a Host-Uniq TAG construct described

in IETF RFC 2516 (Fig. 2, CPE device connected via an IP network to access

concentrator, see "include a tag host-unique tag" recited in paragraph 0008 lines 7-9);

regarding claim 17, further comprising the first of the plurality of remote devices,

wherein the first of the plurality of remote devices comprises an xDSL modem (Fig. 1,

distributed network, see "with various digital subscriber line DSL services" recited in

paragraph 0025 lines 1-9); regarding claim 20, wherein the Broadband Remote Access

Server communicatively coupled to the LAN engine (Fig. 2, CPE device connected via

an IP network to access concentrator, see "CPE devices 225 are connected to access

concentrator " recited in see paragraph 0027 lines 1-4) and operable to maintain

information representing the subscriber LAN device (Fig. 1, distributed network, see

"access concentrator collects CPE provided information" recited in paragraph 0022 lines

7-11);

Hossain et al. disclose the following features: regarding claim 14, a different PPP

session of a different one of the plurality of remote devices (Fig. 3, a nodal operation

and signal flow diagram of a data communications network, see "the access

concentrator receives the message 302 from any one of plurality of clients of WLAN 140

of fig. 1" recited in paragraph 0037 lines 1-12 and paragraph 0044 lines 7-15).

Jones et al. and Hossain et al. do not disclose the following features: regarding

claim 14, wherein the access concentrator comprises a cable modem termination

system and wherein the access concentrator comprises a digital subscriber line access

multiplexer.

Yusko et al. disclose communication system for PPP auto-connect with the

following features: regarding claim 14, wherein the access concentrator comprises a

cable modem termination system (Fig. 1A-C, schematic diagrams illustrating an

exemplary implementation of a distributed network having a CPE adapted to

automatically establish a physical transport layer connection with an access

concentrator, see "the access concentrator 112 comprises of DSL modem, cable

modem and router etc." recited in paragraph 0021 lines 1-25) and wherein the access

concentrator comprises a digital subscriber line access multiplexer (Fig. 1A-C,

schematic diagrams illustrating an exemplary implementation of a distributed network

having a CPE adapted to automatically establish a physical transport layer connection

with an access concentrator, see "the access concentrator 106 comprises of DSL

modem and DSLAM" recited in paragraph 0022 lines 1-12).

It would have been obvious to one of the ordinary skill in the art at the time of

invention to modify the system of Jones et al. with Hossain et al. by using the features,

as taught by Yusko et al., in order to provide the access concentrator comprises a cable

modem termination system and wherein the access concentrator comprises a digital

subscriber line access multiplexer. The motivation of using these functions is to

enhance the system in a cost effective manner.

7.   Claims 21-22, 24, 29 and 31-32 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Jones et al. (US 2005/0033853) in view of Hossain et al. (US

2004/0258028 A1) and Yusko et al. (US 2004/0001496 A1) and further in view of Adcox

et al. (US 2003/0236916 A1).

Jones et al. disclose a communication system to identify devices employing point

to point over Ethernet encapsulation with the following features: regarding claim 21, a

method of identifying remote devices comprising (Fig. 1, distributed network, see

"utilizes point to point over Ethernet PPPoE" recited in paragraph 0008 lines 1-3),

receiving a PPPoE packet from a router of a remote node at an access concentrator

(Fig. 2, CPE device connected via an IP network to access concentrator, see "the

access concentrator receives a PPPoE active discovery session packet from CPE"

recited in paragraph 0008 lines 9-16 and paragraph 0012 lines 2-5), wherein the PPPoE

packet comprises a tag including information associated with a device communicating

via the remote node (Fig. 2, CPE device connected via an IP network to access

concentrator, see "sending a PPPoE active discovery packet" recited in paragraph 0009

lines 1-5), wherein the device and a different device are distinct LAN nodes in a LAN

and in communicate with a router (Fig. 3, stages of PPPoE discovery, see "the Ethernet

communication session is then conducted between the client and the server" recited in

paragraph 0031 lines 11-14); regarding claim 22, further comprising: associating the

remote node with a subscriber; and maintaining subscriber information comprising an

identification of the device and the different device (Fig. 2, CPE device connected via an

IP network to access concentrator, see "device identifier in the tag with a PADR packet"

recited in paragraph 0032 lines 12 on page 2 and lines 3-10); regarding claim 24,

wherein the PPPoE packet comprises a PPPoE Active Discovery Initiation (PADI)

packet (Fig. 2, CPE device connected via an IP network to access concentrator, see

"include a device identifier code" recited in paragraph 0008 lines 3-7); regarding claim

29, wherein the communication network node comprises a Broadband Remote Access

Server (Fig. 2, CPE device connected via an IP network to access concentrator, see

"CPE devices 225 are connected to access concentrator " recited in paragraph 0027

lines 1-4); regarding claim 31, wherein the tag comprises a sixteen-bit tag (Fig. 6,

Ethernet payload for PPPoE, see "session ID field 612 is 16 bits" recited in paragraph

0040 lines 1-2) and regarding claim 32, wherein the tag complies with a Host-Uniq TAG

construct described in IETF RFC 2516 (Fig. 2, CPE device connected via an IP network

to access concentrator, see "include a tag host-uniq tag" recited in paragraph 0008 lines

7-9).

Hossain et al. disclose the following features: regarding claim 21, receiving

another PPPoE packet from the router of the remote node (Fig. 3, a nodal operation and

signal flow diagram of a data communications network, see "the access concentrator

receives the message 302 from any one of plurality of clients of WLAN 140 of fig. 1"

recited in paragraph 0037 lines 1-12 and paragraph 0044 lines 7-15) and wherein the

other PPPoE packet comprises a different tag including other information associated

with a different device communicating via the remote node, wherein the device and the

different are distinct LAN nodes in a LAN and are in communication with the router

wherein the different is identified as communicating via the remote node and requesting

the different PPP session (Fig. 3, a nodal operation and signal flow diagram of a data

communications network, see "the APC 142 responses to the message and uniquely

identifies the PPPoE data session 311 " recited in paragraph 0037 lines 15-38 and

paragraph 0044 lines 7-15).

Yusko et al. disclose the following features: regarding claim 21, providing a

broadband link at least partially a communicating network node and the remote node

(Fig. 1A-C, schematic diagrams illustrating an exemplary implementation of a distributed network having a CPE adapted to automatically establish a physical transport layer connection with an access concentrator, see "the access concentrator 106 comprises of DSL modem and DSLAM" recited in paragraph 0022 lines 1-12).

Jones et al., Hossain et al. and Yusko et al. do not disclose the following features: regarding claim 21, wherein the device is selected from a group consisting of a computer, a wireless access point, a Universal Serial Bus device, a Voice over Internet Protocol telephone, a television, a Set Top Box, a refrigerator, a washing machine, and a home networking device.

Adcox et al. disclose a communication system for Media Access Control address translation for a fiber to the home system with the following features: regarding claim 21, wherein the device is selected from a group consisting of a computer, a wireless access point, a Universal Serial Bus device, a Voice over Internet Protocol telephone, a television, a Set Top Box, a refrigerator, a washing machine, and a home networking device (Fig. diagram illustrating the configuration of fiber to the home (FTTH) system 10 that may be used with the MAC layer address translation, see "the PPPoE session is initiated at the customer's computer" recited in paragraph 0032 lines 1-15).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of Jones et al. with Hossain et al. and Yusko et al. by using the features, as taught by Adcox et al., in order to provide the device is selected from a group consisting of a computer, a wireless access point, a Universal Serial Bus device, a Voice over Internet Protocol telephone, a television, a Set Top Box, a

refrigerator, a washing machine, and a home networking device. The motivation of

using these functions is to enhance the system in a cost effective manner.

8.   Claims 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Jones et al. (US 2005/0033853) in view of Hossain et al. (US 2004/0258028 A1) as

applied to claim 1 and further in view of Kortum et al. (US 2005/0166261 A1).

      Jones et al. and Hossain et al. disclose the claimed limitations as described in

the paragraph 5 above. Jones et al. and Hossain et al. do not disclose the following

features: regarding claim 8, further comprising utilizing a PPPoE client executing at a

node at least partially interconnecting a LAN to a wide area network node to generate

the PPPoE discovery stage packet and regarding claim 12, wherein the router

comprises a modem device selected from the group consisting of an xDSL modem, a

cable modem, a fixed wireless modem, and a satellite modem.

      Kortum et al. disclose communication system for network authentication of a data

service offering with the following features: regarding claim 8, further comprising utilizing

a PPPoE client executing at a node at least partially interconnecting a LAN to a wide

area network node to generate the PPPoE discovery stage packet (Fig. 1, illustrating a

flow diagram of technique 10 of authenticating an accessing device, see "xDSL modem,

cable modem etc. are capable of executing PPPoE client" recited in paragraph 0013

lines 1-7) and regarding claim 12, further comprising utilizing a modem device to output

the PPPoE discovery stage packet, wherein the modem device is selected from the

group consisting of an xDSL modem, a cable modem, a fixed wireless modem, and a

satellite modem (Fig. 1, illustrating a flow diagram of technique 10 of authenticating an

accessing device, see "xDSL modem, cable modem etc. are capable of executing

PPPoE client" recited in paragraph 0013 lines 1-7).

It would have been obvious to one of the ordinary skill in the art at the time of

invention to modify the system of Jones et al. by using the features, as taught by

Kortum et al., in order to provide utilizing a PPPoE client executing at a node at least

partially interconnecting a LAN to a wide area network node to generate the PPPoE

discovery stage packet and utilizing a modem device to output the PPPoE discovery

stage packet, wherein the modem device is selected from the group consisting of an

xDSL modem, a cable modem, a fixed wireless modem, and a satellite modem. The

motivation of using these functions is to enhance the system in a cost effective manner.

9.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et

al. (US 2005/0033853) in view of Hossain et al. (US 2004/0258028 A1) as applied to

claim1 and further in view of Nassar (2004/0004968 A1).

Jones et al. and Hossain et al. disclose the claimed limitations as described in

the paragraph 5 above. Jones et al. and Hossain et al. do not disclose the following

features: regarding claim 10, further comprising disabling a Network Address

Translation feature in connection with the PPP session.

Nassar disclose a communication system for dynamic simultaneous connection to multiple service providers with the following features: regarding claim 10, further comprising disabling a Network Address Translation feature in connection with the PPP session (Fig. 13, illustrating steps for terminating an application during an active session, see "the router disable the NAT rule (step 1340)" recited in paragraph 0059 lines 1-16).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of Jones et al. with Hossain et al. by using the features, as taught by Nassar, in order to provide disabling a Network Address Translation feature in connection with the PPP session. The motivation of using this function is to enhance the system in a cost effective manner.

10.   Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (US 2005/0033853) in view of Hossain et al. (US 2004/0258028 A1) as applied to claim 1 and further in view of Tang et al. (US 2004/0059821 A1).

Jones et al. and Hossain et al. disclose the claimed limitations as described in the paragraph 5 above. Jones et al. and Hossain et al. do not disclose the following features: regarding claim 11, further comprising receiving the request via a connection type selected from the group consisting of an Ethernet link, an 802.11 (x) link, a Bluetooth link, a Universal Serial Bus link, and a power line networking link.

Tang et al. disclose a communication system for a point-to-point protocol bridge operating mode with the following features: regarding claim 11, further comprising receiving the request via a connection type selected from the group consisting of an Ethernet link, an 802.11 (x) link, a Bluetooth link, a Universal Serial Bus link, and a power line networking link (Fig. 1, illustrating the overall data communication system, see "upon receiving the request of PPP session from a user terminal 101" recited in paragraph 0064 lines 1-10).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of Jones et al. with Hossain et al. by using the features, as taught by Tang et al., in order to provide receiving the request via a connection type selected from the group consisting of an Ethernet link, an 802.11 (x) link, a Bluetooth link, a Universal Serial Bus link, and a power line networking link. The motivation of using these functions is to enhance the system in a cost effective manner.

11.   Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (US 2005/0033853) in view of Hossain et al. (US 2004/0258028 A1) and in view of Yusko et al. (US 2004/0001496 A1) as applied to claim 1 above, and further in view of Kortum et al. (US 2005/0166261 A1).

Jones et al., Hossain et al. and Yusko et al. disclose the claimed limitations as described in paragraphs 5 and 8 above. Yusko et al. also disclose the following features: regarding claim 13, communicatively coupling the modem device and a

plurality of other modem devices to an access concentrator node of a wide area network

(Fig. 1A-C, schematic diagrams illustrating an exemplary implementation of a distributed

network having a CPE adapted to automatically establish a physical transport layer

connection with an access concentrator, see "the access concentrator 112 comprises of

DSL modem, cable modem and router etc." recited in paragraph 0021 lines 1-25).

Jones et al., Hossain et al. and Yusko et al. do not disclose the following

features: regarding claim 13, further comprising: utilizing a modem device to output the

PPPoE discovery stage packet and the different PPPoE discovery stage packet.

Kortum et al. disclose the following feature: regarding claim 13, further

comprising: utilizing a modem device to output the PPPoE discovery stage packet and

the different PPPoE discovery stage packet (Fig. 1, illustrating a flow diagram of

technique 10 of authenticating an accessing device, see "xDSL modem, cable modem

etc. are capable of executing PPPoE client" recited in paragraph 0013 lines 1-7).

It would have been obvious to one of the ordinary skill in the art at the time of

invention to modify the system of Jones et al. with Hossain et al. and Yusko et al. by

using the features as taught by Kortum et al., in order to provide further comprising:

utilizing a modem device to output the PPPoE discovery stage packet and the different

PPPoE discovery stage packet. The motivation of using this function is to enhance the

system in a cost effective manner.

12.   Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et

al. (US 2005/0033853) in view of Hossain et al. (US 2004/0258028 A1) and Adcox et al.

(US 2003/0236916 A1) as applied to claim 21 and 22 above, and further in view of

Zhang et al. (US 2007/0159971 A1).

Jones et al., Hossain et al. and Adcox et al. disclose the claimed limitations as

described in paragraphs 5 and 7 above. ones et al., Hossain et al. and Adcox et al. do

not disclose the following features: regarding claim 25, further comprising: altering a

cost of using the broadband link in response to recognizing an additional device

communicating with the communication network node via the remote node.

Zhang et al. disclose a communication system for broadband access with great

capacity with the following features: regarding claim 25, further comprising: altering a

cost of using the broadband link in response to recognizing an additional device

communicating with the communication network node via the remote node (Fig. 2,

schematic diagram of the network architecture of high capacity subscriber access

devices, see "the IP sharing among plurality of DSLAMs reduces the cost" recited in

paragraph 0042 lines 1-14).

It would have been obvious to one of the ordinary skill in the art at the time of

invention to modify the system of Jones et al. with Hossain et al. and Adcox et al. by

using the features, as taught by Zhang et al., in order to provide altering a cost of using

the broadband link in response to recognizing an additional device communicating with

the communication network node via the remote node. The motivation of using this

function is to enhance the system in a cost effective manner.

13.   Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (US 2005/0033853) in view of Hossain et al. (US 2004/0258028 A1) and Adcox et al. (US 2003/0236916 A1) as applied to claim 21-22 above, and further in view of Adamczyk et al. (US 2005/0015494 A1).

        Jones et al., Hossain et al. and Adcox et al. disclose the claimed limitations as described in paragraphs 5 and 7 above. Jones et al., Hossain et al. and Adcox et al. do not disclose the following features: regarding claim 26, further comprising considering the subscriber information in connection with generating a marketing offer presentable to the subscriber.

        Adamczyk et al. disclose a communication system for managing quality of service with the following features: regarding claim 26, further comprising considering the subscriber information in connection with generating a marketing offer presentable to the subscriber available (Fig. 3, a block diagram illustrating the regional access network, see "upgrades to marketing categories and the providers extend the service offering" recited in paragraph 0007 lines 1-10 and paragraph 0456 lines 1-10).

        It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of Jones et al. with Hossain et al. and Adcox et al. by using the features, as taught by Adamczyk et al., in order to provide considering the subscriber information in connection with generating a marketing offer presentable to the subscriber. The motivation of using this function is to enhance the system in a cost effective manner.

14.   Claim 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et

al. (US 2005/0033853) in view of Hossain et al. (US 2004/0258028 A1) and Adcox et al.

(US 2003/0236916 A1) as applied to claim 21-22 above, and further in view of Angel et

al. (US 2004/0044789 A1).

       Jones et al., Hossain et al. and Adcox et al. disclose the claimed limitations as

described in paragraphs 5 and 7 above. Jones et al., Hossain et al. and Adcox et al. do

not disclose the following features: regarding claim 27, further comprising considering

the subscriber information in connection with making a communication network planning

decision.

       Angel et al. disclose a communication system Dynamic service-aware

aggregation of PPP sessions with the following features: regarding claim 27, further

comprising considering the subscriber information in connection with making a

communication network planning decision (Fig. 2B, illustrating an access

network/transport configured by dynamic service selection, see "controlling user

bandwidth consumption as well as for network planning and engineering" recited in

paragraph 0100 lines 1-2).

       It would have been obvious to one of the ordinary skill in the art at the time

of invention to modify the system of Jones et al. with Hossain et al. and Adcox et al. by

using the features, as taught by Angel et al., in order to provide considering the

subscriber information in connection with making a communication network planning

decision. The motivation of using this function is to enhance the system in a cost

effective manner.

15.   Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et

al. (US 2005/0033853) in view of Hossain et al. (US 2004/0258028 A1) and Adcox et

al. (US 2003/0236916 A1) as applied to claim 21-22 above, and further in view of

Pedersen et al. (2005/0025061 A1).

        Jones et al., Hossain et al. and Adcox et al. disclose the claimed limitations as

described in paragraphs 5 and 7 above. Jones et al., Hossain et al. and Adcox et al. do

not disclose the following features: regarding claim 28, further comprising receiving a

trouble-shooting request from the subscriber; and considering the subscriber

information in connection with offering a suggestion responsive to the trouble-shooting

request.

        Pedersen disclose a communication system for link testing in an Ethernet DSL

network with the following features: regarding claim 28, further comprising receiving a

trouble-shooting request from the subscriber; and considering the subscriber

information in connection with offering a suggestion responsive to the trouble-shooting

request (Fig. 2, a simplified functional block diagram of the intermediate node illustrating

its connections to the end nodes via different transmission media, see "a customer

complaint is received and the response to the complaint is sent" recited in abstract lines

6-11 and paragraph 007 lines 1-14).

It would have been obvious to one of the ordinary skill in the art at the time of

invention to modify the system of Jones et al. with Hossain et al. and Adcox et al. by

using the features, as taught by Pedersen et al., in order to provide comprising receiving

a trouble-shooting request from the subscriber; and considering the subscriber

information in connection with offering a suggestion responsive to the trouble-shooting

request. The motivation of using this function is to enhance the system in a cost

effective manner.

Response to Arguments

16.   Applicant's arguments filed February 25th 2009 have been fully considered but

they are not persuasive. Applicant states in the remarks regarding claim 1, "above cited

references fail to disclose or suggest outputting from the router a PPPoE discovery

stage packet that comprises a tag identifying the LAN side device". Examiner

respectfully disagrees. Jones teaches the claimed limitations "outputting from the router

a PPPoE discovery stage packet that comprises a tag identifying the LAN side device

as recited in paragraph 0009 lines 1-5". The CPE can be router or switch as recited in

paragraph 0004 lines 1-6. Applicant states regarding claim 14, "cited references fail to

disclose or suggest a Local Area Network (LAN) engine communicatively coupled to the

interface and configured to recognize an identification tag in a packet included in a

discovery stage of the PPP session output by a router, the identification tag identifying a

subscriber LAN device communicating the packet via the first of the plurality of remote

devices". Examiner respectfully disagrees. The prior art teaches the claimed limitations

"a Local Area Network (LAN) engine communicatively coupled to the interface and

configured to recognize an identification tag in a packet included in a discovery stage of

the PPP session output by a router, the identification tag identifying a subscriber LAN

device communicating the packet via the first of the plurality of remote devices" recited

in paragraph 0012 lines 1-10". The networks routing domains 103 and 105 may be

residence/subscribers home networks, local area networks (LAN) as recited in

paragraph 0024 lines 12-17. Applicant states regarding claim 21, "cited portions of the

above cited references fail to disclose or suggest receiving a PPPoE packet from a

router of a remote node at an access concentrator wherein the PPPoE packet

comprises a tag including information associated with a device communicating via the

remote node". Examiner respectfully disagrees. Jones teaches the claimed limitations

"receiving a PPPoE packet from a router of a remote node at an access concentrator

wherein the PPPoE packet comprises a tag including information associated with a

device communicating via the remote node as recited in paragraph 0008 lines 9-16,

paragraph 0012 lines 2-5 and paragraph 0009 lines 1-5". The motivation of combining

Hossain et al. with Jones et al. is that it his invention is WLAN access point controller

(APC). That acts to receive PPPoE data frame and to translate it to GRE. The

motivation of combining Yusko et al. with Jones and Hossain is that it allows the user to

make transport connections from a LAN to a WAN by transmitting IP traffic to the PPP

protocol such as PPPoE. The motivation of combing Adcox with Jones, Hosain and

Yusko is that the FTTH system of Adcox provides high speed symmetrical data

transportation using a secure point-to point protocol over Ethernet (PPPoE) transport

protocol.

Conclusion

17.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to SYED BOKHARI whose telephone number is (571)270-

3115. The examiner can normally be reached on Monday through Friday 8:00-17:00

Hrs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kwang B. Yao can be reached on (571) 272-3182. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Syed Bokhari/
Examiner, Art Unit 2416
6/9/2009

/KWANG B. YAO/
Supervisory Patent Examiner, Art Unit 2416